IN THE CLAIMS:

Claim 1 (Currently Amended): A method of forming a color filter layer, comprising:

forming a first sub-color filter on a substrate by placing a first mold having at least a first groove on the substrate such that the first groove and the substrate constitute a first channel and injecting a first color resin into the first channel for a first time, the substrate including first, second and third regions and the first groove corresponding to the first region, wherein injecting the first color resin into the first channel is performed after placing the first mold on the substrate, and wherein the first time is determined by $t1 = (2\eta 1 z1^2)/(R1\gamma 1 \cos\theta 1)$, where t1 is the first time, $\eta 1$ is a viscosity of the first color resin, z1 is a length of the first channel, R1 is a hydraulic radius of the first color resin, $\gamma 1$ is an interface free energy between the first color resin and an air, and $\theta 1$ is a contact angle between the first color resin and the first mold;

forming a second sub-color filter on the substrate by placing a second mold having at least a second groove on the substrate such that the second groove, the first sub-color filter and the substrate constitute a second channel and injecting a second color resin into the second channel for a second time, the second groove corresponding to the first and second regions, the first sub-color filter used as one sidewall of the second channel and the second mold used as the other sidewall of the second channel while injecting the second color resin, wherein injecting the second color resin into the second channel is performed after placing the second mold on the substrate, and wherein the second time is determined by $t2 = (2\eta 2 z2^2)/(R2\gamma 2 \cos\theta 2)$, where t2 is the second time, $\eta 2$ is a viscosity of the second color resin,

z2 is a length of the second channel, R2 is a hydraulic radius of the second color resin, $\gamma 2$ is an interface free energy between the second color resin and the air, and $\theta 2$ is a contact angle between the second color resin and the second mold; and

forming a third sub-color filter on the substrate by placing a third mold having at least a third groove on the substrate such that the third groove, the first sub-color filter, the second sub-color filter and the substrate constitute a third channel and injecting a third color resin into the third channel for a third time, the third groove corresponding to the first, second and third regions, the second sub-color filter used as one sidewall of the third channel and the third mold used as the other sidewall of the third channel while injecting the third color resin, wherein injecting the third color resin into the third channel is performed after placing the third mold on the substrate, wherein the third time is determined by $t3 = (2\eta 3z3^2)/(R3\gamma 3\cos\theta 3)$, where t3 is the third time, $\eta 3$ is a viscosity of the third color resin, z3 is a length of the third channel, R3 is a hydraulic radius of the third color resin, $\gamma 3$ is an interface free energy between the third color resin and the air, and $\theta 3$ is a contact angle between the third color resin and the third mold, and wherein the second groove has a volume greater than the first groove and smaller than the third groove.

Claim 2 (Original): The method according to claim 1, wherein the first color resin is injected through an opening of the first groove, the second color resin is injected through an opening of the second groove, and the third color resin is injected through an opening of the third groove.

Claim 3 (Original): The method according to claim 1,

wherein the forming the first sub-color filter on the substrate further comprises:

curing the first color resin with one of heat and light; and

detaching the first mold from the substrate,

wherein the forming the second sub-color filter on the substrate further comprises:

curing the second color resin with one of heat and light; and

detaching the second mold from the substrate, and

wherein the forming the third sub-color filter on the substrate further comprises:

curing the third color resin with one of heat and light; and

detaching the third mold from the substrate.

Claim 4 (Original): The method according to claim 1, wherein the first mold, the second mold and the third mold include a transparent material.

Claim 5 (Original): The method according to claim 1, wherein the second groove covers the first sub-color filter when the second mold is placed on the substrate.

Claim 6 (Original): The method according to claim 1, wherein the third groove covers the first and second sub-color filters when the third mold is placed on the substrate.

Claim 7 (Original): The method according to claim 1, wherein the first, second and third sub-color filters have one of stripe shape, round shape and zigzag shape.

Claim 8 (Original): The method according to claim 1, further comprises forming a black matrix over the substrate.

Claim 9 (Original): The method according to claim 1, wherein the first, second and third regions correspond to pixel regions of a liquid crystal device.

Claim 10 (Original): The method according to claim 1, wherein the first, second and third color resins are injected by a capillary force.

Claim 11 (Currently Amended): A method of forming a color filter layer, comprising:

attaching a first mold having at least a first groove on a substrate and forming a first channel by the first groove and the substrate;

filling the first channel with a first color resin for a first time to form a first sub-color filter after attaching the first mold on the substrate, wherein the first time is determined by $t1 = (2\eta 1 z1^2)/(R1\gamma 1 \cos\theta 1)$, where t1 is the first time, $\eta 1$ is a viscosity of the first color resin, z1 is a length of the first channel, R1 is a hydraulic radius of the first color resin, $\gamma 1$ is an interface free energy between the first color resin and an air, and $\theta 1$ is a contact angle between the first color resin and the first mold;

attaching a second mold having at least a second groove on the substrate and forming a second channel by the second groove, the first sub-color filter and the substrate;

filling the second channel with a second color resin for a second time to form a second sub-color filter after attaching the second mold on the substrate, the first sub-color filter used

as one sidewall of the second channel and the second mold used as the other sidewall of the second channel while filling the second channel with the second color resin, wherein the second time is determined by $t2 = (2\eta 2z2^2)/(R2\gamma 2\cos\theta 2)$, where t2 is the second time, $\eta 2$ is a viscosity of the second color resin, z2 is a length of the second channel, R2 is a hydraulic radius of the second color resin, $\gamma 2$ is an interface free energy between the second color resin and the air, and $\theta 2$ is a contact angle between the second color resin and the second mold;

attaching a third mold having at least a third groove on the substrate and forming a third channel by the third groove, the first sub-color filter, the second color-filter and the substrate; and

filling the third channel with a third color resin for a third time to form a third sub-color filter after attaching the third mold on the substrate, the second sub-color filter used as one sidewall of the third channel and the third mold used as the other sidewall of the third channel while filling the third channel with the third color resin, wherein the third time is determined by $t3 = (2\eta 3z3^2)/(R3\gamma 3\cos\theta 3)$, where t3 is the third time, $\eta 3$ is a viscosity of the third color resin, z3 is a length of the third channel, R3 is a hydraulic radius of the third color resin, $\gamma 3$ is an interface free energy between the third color resin and the air, and $\theta 3$ is a contact angle between the third color resin and the third mold, and wherein the second groove has a volume greater than the first groove and smaller than the third groove.

Claim 12 (Original): The method according to claim 11, wherein the first mold, the second mold and the third mold include a transparent material.

Claim 13 (Original): The method according to claim 11, further comprises:

curing the first sub-color filter with one of heat and light;

detaching the first mold from the substrate;

curing the second sub-color filter with one of heat and light;

detaching the second mold from the substrate;

curing the third sub-color filter with one of heat and light; and

detaching the third mold from the substrate.

Claim 14 (Original): The method according to claim 11, wherein the first, second and third channels are filled by a capillary force.

Claim 15 (Original): The method according to claim 11, wherein a volume of the first groove is substantially the same as a volume of the first sub-color filter, a volume of the second groove is substantially the same as a sum of volumes of the first and second sub-color filters, and a volume of the third groove is substantially the same as a sum of volumes of the first, second and third sub-color filters.

Claim 16 (Currently Amended): A method of fabricating a color filter substrate for a liquid crystal display device, comprising:

forming a black matrix on a substrate having first, second and third regions;

attaching a first mold having a first groove on the substrate, the first groove corresponding to the first region, wherein the first groove and the substrate constitute a first channel;

filling the first channel with a first color resin for a first time to form a first sub-color filter after attaching the first mold on the substrate, wherein the first time is determined by $t1 = (2\eta 1 z1^2)/(R1\gamma 1\cos\theta 1)$, where t1 is the first time, $\eta 1$ is a viscosity of the first color resin, z1 is a length of the first channel, R1 is a hydraulic radius of the first color resin, $\gamma 1$ is an interface free energy between the first color resin and an air, and $\theta 1$ is a contact angle between the first color resin and the first mold;

curing the first sub-color filter;

detaching the first mold from the substrate;

attaching a second mold having a second groove on the substrate, the second groove corresponding to the first and second regions, wherein the second groove, the first sub-color filter and the substrate constitute a second channel;

filling the second channel with a second color resin for a second time to form a second sub-color filter after attaching the second mold on the substrate, the first sub-color filter used as one sidewall of the second channel and the second mold used as the other sidewall of the third channel while filling the second channel with the second color resin, wherein the second time is determined by $t2 = (2\eta 2 z2^2)/(R2\gamma 2\cos\theta 2)$, where t2 is the second time, $\eta 2$ is a viscosity of the second color resin, z2 is a length of the second channel, R2 is a hydraulic radius of the second color resin, $\gamma 2$ is an interface free energy between the second color resin and the air, and $\theta 2$ is a contact angle between the second color resin and the second mold;

curing the second sub-color filter;

detaching the second mold from the substrate;

attaching a third mold having a third groove on the substrate, the third groove corresponding to the first, second and third regions, wherein the third groove, the first sub-color filter, the second sub-color filter and the substrate constitute a third channel, and wherein the second groove has a volume greater than the first groove and smaller than the third groove;

filling the third channel with a third color resin for a third time to form a third sub-color filter after attaching the third mold on the substrate, the second sub-color filter used as one sidewall of the third channel and the third mold used as the other sidewall of the third channel while filling the third channel with the third color resin, wherein the third time is determined by $t3 = (2\eta 3 z3^2)/(R3\gamma 3\cos\theta 3)$, where t3 is the third time, $\eta 3$ is a viscosity of the third color resin, z3 is a length of the third channel, R3 is a hydraulic radius of the third color resin, $\gamma 3$ is an interface free energy between the third color resin and the air, and $\theta 3$ is a contact angle between the third color resin and the third mold;

curing the third sub-color filter;

detaching the third mold from the substrate; and

forming a common electrode on a color filter layer including the first, second and third sub-color filters.

Claim 17 (Original): The method according to claim 16, wherein the first mold, the second mold and the third mold include a transparent material.

Claim 18 (Original): The method according to claim 17, wherein the transparent material includes polydimethylsiloxane (PDMS).

Claim 19 (Original): The method according to claim 16, wherein the first sub-color filter is cured by irradiating light through the first mold, the second sub-color filter is cured by irradiating light through the second mold, and the third sub-color filter is cured by irradiating light through the third mold.

Claim 20 (Original): The method according to claim 16, wherein the first, second and third regions correspond to pixel regions of the liquid crystal device.